AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original):   A force input manipulator that operates an object according to a manipulating force applied to a manipulating unit, comprising:

an applied force detector which detects the manipulating force applied to the manipulating unit;

an operation mode selector which decides a reference manipulating force closest to the detected manipulating force applied out of a plurality of reference manipulating forces stored in advance in correlation with a plurality of operation modes, and selects the operation mode corresponding to the decided reference manipulating force; and

a motion control signal generator which outputs a motion control signal for controlling the motion of the object according to the selected operation mode.

Claim 2 (original): The force input manipulator according to claim 1, further comprising means for developing and storing the reference manipulating force based on the applied manipulating force.

Claim 3 (currently amended): The force input manipulator according to claim 1 or 2, wherein the applied force detector is a biaxial force sensor which detects a force acting in a direction with respect to the object and in another direction intersecting the first mentioned direction.

Claim 4 (currently amended): The force input manipulator according to claim 1 or 2, wherein the applied force detector includes a plurality of force sensors, out of which at least two sensors are employed for one direction.

Claim 5 (currently amended): The force input manipulator according to ~~any of claims~~ claim 1 ~~to~~ 4, wherein the operation mode is one of moving straight, changing a direction and rotating.

Claim 6 (currently amended): The force input manipulator according to ~~any of claims~~claim 1 ~~to~~ 5, wherein the operation mode selector stores a decision region defined by a magnitude and acting direction of the force with respect to each reference manipulating force, so as to specify the decision region to which the applied manipulating force belongs, based on the magnitude and acting direction thereof, and thus to decide the reference manipulating force closest to the applied manipulating force.

Claim 7 (currently amended): The force input manipulator according to ~~any of claims~~claim 1 ~~to~~ 5, wherein the operation mode selector has a function of deciding the reference manipulating force closest to the applied manipulating force, based on a difference in direction between the acting direction of the applied manipulating force and that of the reference manipulating force.

Claim 8 (currently amended): The force input manipulator according to ~~any of claims~~claim 1 ~~to~~ 5, wherein the operation mode selector has a function of utilizing the magnitude and acting direction of the applied manipulating force and those of the reference manipulating force to calculate a distance in a two-dimensional space defined by the magnitude and the direction, and deciding the reference manipulating force closest to the applied manipulating force based on the length of the calculated distance.

Claim 9 (currently amended): A mobile object comprising the force input manipulator according to ~~any of claims~~claim 1 ~~to~~ 8, so as to move according to the motion control signal output by the motion control signal generator.

Claim10 (original): A push cart comprising the mobile object according to claim 9.

Claim 11 (original): A walker comprising the mobile object according to claim 9.

Claim 12 (new): The force input manipulator according to claim 2, wherein the applied force detector is a biaxial force sensor which detects a force acting in a direction with respect to the object and in another direction intersecting the first mentioned direction.

Claim 13 (new): The force input manipulator according to claim 2, wherein the applied force detector includes a plurality of force sensors, out of which at least two sensors are employed for one direction.

Claim 14 (new): The force input manipulator according to claim 2, wherein the operation mode is one of moving straight, changing a direction and rotating.

Claim 15 (new): The force input manipulator according to claim 2, wherein the operation mode selector stores a decision region defined by a magnitude and acting direction of the force with respect to each reference manipulating force, so as to specify the decision region to which the applied manipulating force belongs, based on the magnitude and acting direction thereof, and thus to decide the reference manipulating force closest to the applied manipulating force.

Claim 16 (new): The force input manipulator according to claim 2, wherein the operation mode selector has a function of deciding the reference manipulating force closest to the applied manipulating force, based on a difference in direction between the acting direction of the applied manipulating force and that of the reference manipulating force.

Claim 17 (new): The force input manipulator according to claim 2, wherein the operation mode selector has a function of utilizing the magnitude and acting direction of the applied manipulating force and those of the reference manipulating force to calculate a distance in a two-dimensional space defined by the magnitude and the direction, and deciding the reference

manipulating force closest to the applied manipulating force based on the length of the calculated distance.

Claim 18 (new): A mobile object comprising the force input manipulator according to claim 2, so as to move according to the motion control signal output by the motion control signal generator.

Claim 19 (new): A push cart comprising the mobile object according to claim 18.

Claim 20 (new): A walker comprising the mobile object according to claim 18.